

Appl. No. 09/930,804

Amdt. Dated: February 4, 2005

Response to Office action dated: December 14, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1 (Currently amended): A variable size first in first out (FIFO) memory comprising:

a head FIFO memory for sequentially delivering data packets at a relatively slow rate to a plurality of switching elements whereby some latency occurs between said data packets;

a tail FIFO memory for storing an overflow of said data packets from said head memory and for receiving incoming data packets;

both said head FIFO memory and said tail FIFO memory memories operating at a relatively high data rate equivalent to the rate of the incoming data packets;

a large capacity buffer memory having an effectively lower clock rate than said FIFO memories head FIFO memory and said tail FIFO memory, the large capacity buffer memory for temporarily storing data overflow from said tail FIFO memory ;

said head FIFO memory and said tail FIFO memory whereby said FIFO memories in combination with said buffer memory for a forming the variable size FIFO memory.

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2 (Currently amended): The variable size FIFO A memory as in claim 1 wherein said head and tail FIFO memories each have data blocks of a predetermined and same size and wherein said large capacity buffer memory has the same size data block as said head and tail FIFO memories whereby to achieve high efficiency data transfer between said head FIFO memory, said tail FIFO memory and said large capacity buffer memory memories is obtained.

3 (Currently amended): The variable size FIFO A memory as in claim 1 wherein said head and tail FIFO memories reside on a common semiconductor substrate, and wherein said large capacity buffer memory is remote to the semiconductor substrate.

4 (Currently amended): The variable size FIFO A memory as in claim 1 wherein said large capacity buffer memory has a wider bus than a bus included in each of said head and tail FIFO memories.